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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,034	12/04/2003	Kuan-Lun Chang	67,200-1157	8853

7590 04/19/2005

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EXAMINER

GARCIA, JOANNIE A

ART UNIT PAPER NUMBER

2823

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/729,034	Applicant(s) CHANG	
	Examiner Joannie A. Garcia	Art Unit 2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 12-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-8 and 11 is/are rejected.
- 7) ☒ Claim(s) 2,4,9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>05-19-04</u> . | 6) <input type="checkbox"/> Other: _____ |

Applicant's election with traverse of claims 1-11, in the reply filed on 02-04-05 is acknowledged. The traversal is on the ground(s) that the searches are the same, and because of issues related to compact prosecution and public interest. This is not found persuasive because valid reasons for restriction have been stated and applicant does not address these reasons for restriction.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-11 are objected to because of the following informalities:

In claim 1, line 3, "first lower electrode portions;" should be followed by --and--.

In claim 2, line 2, "a" after "with respect to the at least" should be deleted.

Claim 10 recites the limitation "uppermost MIM capacitor structure" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "lowermost MIM capacitor structure" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "semiconductor wafer" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 5-8, and 11, are rejected under 35 U.S.C. 102(e) as being anticipated by Kiyotoshi (US 2004/0152258 A1).

Kiyotoshi discloses a first MIM capacitor structure formed in a first IMD layer 213 comprising a first upper and first lower electrode portions 204a/202a (Figures 17-18), at least a second MIM capacitor structure arranged in stacked relationship in an overlying IMD layer 214 comprising a second upper electrode 210a and second lower electrode 208a to form an MIM capacitor stack (Figures 17-18), wherein a lowermost MIM capacitor structure is formed in an IMD layer greater than about the second IMD layer formed over a semiconductor wafer (Figures 17-18), wherein, the first lower electrode is arranged in common electrical signal communication comprising metal filled vias with the second upper electrode and the first upper electrode is arranged in common electrical signal communication with the second lower electrode (Figure 18), and wherein the upper electrodes including electrically communicating metal filled vias of the respective MIM structures in the MIM capacitor stack comprise a substantially identical structure (Figure 18), a tantalum oxide capacitor dielectric sandwiched between the respective upper and lower electrodes (Figure 18, and Paragraph 0071), and respective upper and lower electrodes comprise TiN, or TaN (Paragraph 0066).

Claims 2, 4, 9, and 10, would be allowable if rewritten to overcome the objection(s) set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joannie García whose telephone number is (571) 272-1861. The examiner can normally be reached on Monday through Friday.

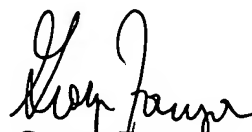
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri, can be reached on (571) 272-1855. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JAG
April 16, 2005

GFourson
Primary Examiner



George Fourson
Primary Examiner
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